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Amendments to the Claims

Listing of Claims

1. (Currently amended) An article of manufacture comprising a program storage medium having computer readable code embodied therein, said computer readable code being configured to implement a software-implemented A software-implemented shared bus system model for modeling a shared bus system that includes a plurality of devices interconnected via a shared bus, comprising:

computer readable code implementing a first device model for partially modeling a first one of said plurality of devices, said first device model including a first modified logical module and a first modified I/O-specific module;

computer readable code implementing a sharable module having provisioned therein first shareable data, said first shareable data being shareable by said first device model and another device model of said plurality of device models, said first shareable data representing I/O-specific data associated with said first device model that is also needed by said another device model of said plurality of device models during configuration of said shared bus system model, said first shareable data further representing data expected to be ~~that would have been~~ provisioned within said first device model ~~if said first device model had been configured to closely mimic that is configured to model~~ the data content of said first one of said plurality of devices, said first shareable data instead being provisioned in said shareable module.

2. (Currently amended) The article of manufacture ~~The software-implemented shared bus system model~~ of claim 1 further comprising:

computer readable code implementing a second device model for partially modeling a second one of said plurality of devices, said second device model including a second modified logical module and a second modified I/O-specific module, wherein said sharable module is provisioned with second shareable data, said second shareable data being shareable by said second device model and said another device model of said

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plurality of device models, said second shareable data representing I/O-specific data associated with said second device model that is also needed by said another device model of said plurality of device models during configuration of said shared bus system model, second shareable data further representing data ~~expected to be that would have been provisioned within said second device model if said second device model had been configured to closely mimic~~ that is configured to model the data content of said second one of said plurality of devices, said second shareable data instead being provisioned in said shareable module.

3. (Currently amended) ~~The article of manufacture The software-implemented shared bus system model~~ of claim 2 wherein said shared bus represents a SCSI (Small Computer System Interface) bus.

4. (Currently amended) ~~The article of manufacture The software-implemented shared bus system model~~ of claim 2 wherein said first shareable data includes timing information specific to said first one of said plurality of devices.

5. (Currently amended) ~~The article of manufacture The software-implemented shared bus system model~~ of claim 2 wherein said shareable module further includes a timing monitor module, said timing monitor module having access to said first shareable data and said second shareable data to configure, during configuration of said shared bus system model, said timing monitor module to facilitate monitoring of interactions at the timing level, during execution, among said first device model, said second device model, and said timing monitor module.

6. (Currently amended) ~~The article of manufacture The software-implemented shared bus system model~~ of claim 2 wherein said shareable module further includes a protocol monitor module, said protocol monitor module having access to said first shareable data and said second shareable data to configure, during configuration of said shared bus system model, said protocol monitor module to facilitate monitoring of

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interactions at the protocol level, during execution, among said first device model, said second device model, and said timing monitor module.

7. (Currently amended) The article of manufacture ~~The software implemented shared bus system model~~ of claim 2 wherein said shareable module further includes shareable logic, said shareable logic representing logic functions executable on behalf of said first device model and said second device model, said shareable logic further representing a logic function expected to be that would have been ~~provisioned within each of said first device model and said second device model if said first device model and said second device model had been configured to closely mimic that are configured to model~~ the logic capabilities of said first one of said plurality of devices and said second one of said plurality of devices respectively, said shareable logic instead being provisioned in said shareable module.

8. (Currently amended) The article of manufacture ~~The software implemented shared bus system model~~ of claim 1 wherein shareable module further includes I/O-specific reset handlers.

9. (Currently amended) The article of manufacture ~~The software implemented shared bus system model~~ of claim 1 wherein said shareable module further includes I/O-specific access methods.

10. (Currently amended) The article of manufacture ~~The software implemented shared bus system model~~ of claim 1 wherein said shareable module further includes functions for configuration of I/O specific parameters.

11. (Currently amended) The article of manufacture ~~The software implemented shared bus system model~~ of claim 1 wherein said shareable module further includes interface to higher level routines.

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12. (Currently amended) ~~The article of manufacture~~ ~~The software-implemented shared bus system model~~ of claim 1 wherein said shared bus represents a SCSI (Small Computer System Interface) bus and wherein said shareable logic represents a bus arbitration function.

13. (Currently amended) A software-implemented method for creating a shared bus system model, said shared bus system model being configured to model a shared bus system comprising a shared bus and a set of devices coupled to said shared bus, said shared bus system model including a set of device models, each of said set of device models partially models a respective one of said set of devices, said shared bus system model further including a monitoring module that monitors bus behavior of individual ones of said set of device models, and a shareable module that is communicable with said set of device-specific models and said monitoring module, said computer-implemented method comprising:

providing first non-I/O specific data to a first device model of said set of device models;

providing first shareable data to said shareable module, said first shareable data being associated with said first device, said first shareable data representing I/O-specific data associated with said first device model that is also needed by said another device model of said plurality of device models during configuration of said shared bus system model, said first shareable data further representing data expected to be ~~that would have been~~ provisioned within said first device model ~~if said first device model had been configured to closely mimic~~ that is configured to model the data content of said first one of said plurality of devices, said first shareable data instead being provisioned in said shareable module,

wherein both said monitoring module and said first device model employ said first shareable data to configure, during configuration of said shared bus system model, said monitoring module and said first device model to appropriately model said shared bus system during execution.

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14. (Original) The software -implemented method of claim 13 wherein said monitoring module includes a timing monitor module configured to monitor, at the timing level, interactions among said first device model, said timing monitor module, and at least one other device model of said plurality of device models.

15. (Original) The software -implemented method of claim 13 wherein said monitoring module includes a protocol monitor module configured to monitor, at the protocol level, interactions among said first device model, said timing monitor module, and at least one other device model of said plurality of device models.

16. (Original) The software -implemented method of claim 13 wherein said first shareable data is employed by another device model of said plurality of models to configure, during configuration of said shared bus system model, said another device model to facilitate communication between said another device model and said first device model during execution.

17. (Currently amended) A software-implemented method for implementing a shared bus system model for modeling a shared bus system that includes a plurality of devices interconnected via a shared bus, comprising:

providing a first device model, implemented in software, for partially modeling a first one of said plurality of devices, said first device model including a first modified logical module and a first modified I/O-specific module;

providing a sharable module, implemented in software, having provisioned therein first shareable data, said first shareable data being shareable by said first device model and another device model of said plurality of device models, said first shareable data representing I/O-specific data associated with said first device model that is also needed by said another device model of said plurality of device models during configuration of said shared bus system model, said first shareable data further representing data expected to be that would have been provisioned within said first device model if ~~said first device model had been configured to closely mimic that is~~

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configured to model the data content of said first one of said plurality of devices, said first shareable data instead being provisioned in said shareable module.

18. (Currently amended) The software-implemented method of claim 17 further comprising:

providing a second device model, implemented in software, for partially modeling a second one of said plurality of devices, said second device model including a second modified logical module and a second modified I/O-specific module, wherein said shareable module is provisioned with second shareable data, said second shareable data being shareable by said second device model and said another device model of said plurality of device models, said second shareable data representing I/O-specific data associated with said second device model that is also needed by said another device model of said plurality of device models during configuration of said shared bus system model, second shareable data further representing data expected to be ~~that would have been~~ provisioned within said second device model ~~if said first device model had been configured to closely mimic~~ that is configured to model the data content of said second one of said plurality of devices, said second shareable data instead being provisioned in said shareable module.

19. (Original) The software-implemented method of claim 18 wherein said shared bus represents a SCSI (Small Computer System Interface) bus.

20. (Original) The software-implemented method of claim 18 wherein said first shareable data includes timing information specific to said first one of said plurality of devices.

21. (Currently amended) The software-implemented method of claim 18 wherein said shareable module further includes shareable logic, said shareable logic representing logic functions executable on behalf of said first device model and said second device model, said shareable logic further representing a logic function expected to be ~~that~~

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~~would have been~~ provisioned within each of said first device model and said second device model ~~if said first device model and said second device model had been configured to closely mimic~~ that are configured to model the logic capabilities of said first one of said plurality of devices and said second one of said plurality of devices respectively, said shareable logic instead being provisioned in said shareable module

22. (Original) The software-implemented method of claim 21 wherein said shared bus represents a SCSI (Small Computer System Interface) bus and wherein said shareable logic represents a bus arbitration function.

23. (Original) The software-implemented method of claim 18 further including provisioning a timing monitoring module in said shareable module, said timing monitor module having access to said first shareable data and said second shareable data to configure, during configuration of said shared bus system model, said timing monitor module to facilitate monitoring of interactions at the timing level, during execution, among said first device model, said second device model, and said timing monitor module.

24. (Original) The software-implemented method of claim 18 further including provisioning a protocol monitoring module in said shareable module, said protocol monitor module having access to said first shareable data and said second shareable data to configure, during configuration of said shared bus system model, said protocol monitor module to facilitate monitoring of interactions at the protocol level, during execution, among said first device model, said second device model, and said timing monitor module.

25. (Original) The software-implemented method of claim 24 further including provisioning a timing monitoring module in said shareable module, said timing monitor module having access to said first shareable data and said second shareable data to configure, during configuration of said shared bus system model, said timing monitor

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module to facilitate monitoring of interactions at the timing level, during execution, among said first device model, said second device model, and said timing monitor module.

26. (Currently amended) The software-implemented method ~~The software-implemented shared bus system model~~ of claim 17 wherein shareable module further includes I/O-specific reset handlers.

27. (Currently amended) The software-implemented method ~~The software-implemented shared bus system model~~ of claim 17 wherein said shareable module further includes I/O-specific access methods.

28. (Currently amended) The software-implemented method ~~The software-implemented shared bus system model~~ of claim 17 wherein said shareable module further includes functions for configuration of I/O specific parameters.

29. (Currently amended) The software-implemented method ~~The software-implemented shared bus system model~~ of claim 17 wherein said shareable module further includes interface to higher level routines.